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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
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Salt Lake City, Utah 84116
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TO: The Board of Oil, Gas & Mining

FROM: Leland Spencer, Reclamation Engineer

SUBJECT: Tentative Approval, Plateau Resources Ltd., Amendment of the Mining and Reclamation Plan for Tony M/Lucky Strike Uranium Mine, Garfield County, Utah, ACT/017/001

DATE: September 25, 1980

The Division staff has reviewed the amendment to Plateau Resource, Ltd., (Plateau) Mining and Reclamation Plan for the Tony M/Lucky Strike Mine in Garfield County and feels that the plan meets the requirements of the Utah Mined Land Reclamation Act for tentative approval.

The Division seeks the Board's concurrence for issuing tentative approval so that publishing an abbreviated version of the plan may proceed. The form and amount of surety will be presented to the Board prior to final approval.

In addition, Plateau seeks authorization from the Board to immediately begin construction of a mine water impoundment for the Tony M Mine. Due to requirements of the State Division of Environmental Health and a dramatic increase in flow of water into the Tony M Mine, Plateau has ceased mine advancement to contain water in the mine. In a letter attached hereto with the Executive Summary, Plateau requests immediate authorization to proceed with construction.

Enclosure

LCS/btm

EXECUTIVE SUMMARY

Plateau Resources Ltd.
Amendment of the Mining and Reclamation Plan
Tony M/Lucky Strike Uranium Mine
Garfield County, Utah
ACT/017/001
Sec. 8, 16, 17 and 21, T. 35 S., R. 11. E., SLBM

During Armstrong Engineers field investigation at the site the boreholes drilled failed to locate the water table at the site. Armstrong Engineers report that records of three exploratory boreholes drilled within the proposed impoundment area located the phreatic surface 420 feet below the lowest elevation of the impoundment area.

All borrow areas will be constructed such that no resulting earth slopes will exceed 3h:1v to insure stability and minimize erosion.

Ecology

Studies of the ecology of this area were conducted in 1977 for the Environmental Report for the uranium processing facility. Vegetative plant cover at the site consists of a sparse cover of xerophytic plants. Wildlife diversity of the area is very low. The site is of little important to deer and no endangered species have been identified in the area.

Proposed Impoundment and Facilities

At present, the mine waste water is discharged at a temporary impoundment, due to the limited storage capacity of the existing and temporary site, construction of an approximate 17.5-acre impoundment is proposed. The construction consists of an earthfill structure designed to prevent seepage and underseepage and to resist rotational and seismic forces with a minimum factor of safety of 1.5. The amendment consists of construction of the earth-fill dam, stripping of the dam site and upstream blanket, stripping of the borrow area, construction of a topsoil storage pile, construction of a pipeline, and construction of a head tank.

During Mining

The 17 acre impoundment will be used for the life of the mine. The pond will be used to evaporate the water, so that none of the discharge will enter surface or ground waters. Following construction vegetation will be established on the dam face and borrow areas. No garbage or debris will be allowed to accumulate on the site and will be disposed of in an acceptable manner.

After Mining

Upon completion of mining activities and before abandonment of the site, the proposed impoundment will be reclaimed. Reclamation activities will include:

- 1) Breaching the dam so that the area will become self-draining and nonimpounding.
- 2) Material from the dam will be spread over the sediment in the pond.
- 3) All slopes will be graded to a shallow angle to prevent erosion and enhance revegetation.
- 4) Topsoil will be distributed over the area and will be tied to the substrate by ripping or scarifying to enhance root penetration.
- 5) Mulching, fertilizing and other soil treatments will be used to enhance revegetation.

Scope

Plateau Resources Ltd., wishes to construct a new water impoundment adjacent to the Tony M/Lucky Strike Uranium Mine to impound and evaporate water which has been encountered during mining. Plateau recently submitted studies and specifications for construction of the impoundment, a reclamation plan, a revised Mined Land Reclamation Contract for surety and a request for authorization to begin construction. The Division has reviewed this information, received comments from the State Division of Water Rights and verbal comments from the State Bureau of Water Pollution Control.

Location

The existing Lucky Strike/Tony M Mine is a 24 acre mining operation located approximately 55 miles south of Hanksville and 15 miles north of Bullfrog Basin via State Route 276 in Shootering Canyon (see enclosed map). The amendment for the water impoundment will extend the disturbed acreage from 24 acres to 55 acres. The additional 31 acres are, 26 acres for the proposed impoundment area, 3 for present impoundment area, 1 for topsoil stockpile and approximately 1 for pipeline route and water tank.

The present impoundment area, 3 acres located in Section 8, T. 35 S., R. 11 E., was not addressed originally and will be addressed along with this amendment. The proposed impoundment area consists of 27 acres in Section 17, T. 35 S., R. 11 E.

Geology and Soils

The impoundment site is located within the Henry Mountains Basin which is characterized by buttes, mesas and canyons. The buttes and mesas in the area are capped with the Salt Wash Member of the Morrison Formation. The impoundment is located in an area of numerous gullies and small hillocks. The proposed site lies entirely within the Brushy Basin Member of the Morrison Formation which is composed of bentonitic claystones of very low permeabilities. The surface soils are composed of highly plastic clayey silts and silty clays which are derivatives of the claystone which is normally found at a depth of from one to two feet in the area. The surface soils of the borrow area adjacent to the proposed impoundment contain little organic material. Soil samples are to be taken prior to construction to determine pH and other factors. The elevation of the site is approximately 4,850 a.s.l. The soil has a poorly differentiated profile and low natural fertility.

Hydrology and Erosion

Surface waters in the vicinity of the proposed impoundment drain into Shootering and Hansen creeks which flow into Lake Powell. These streams have been categorized as Class C waters which means that without treatment these waters are suitable for irrigation, stock watering and the propagation and perpetuation of fish and wildlife. The drainage area for the impoundment area consists of approximately 50 acres of foothill and cliff areas. The pond will be for full containment and evaporation of water produced from the Lucky Strike/Tony M Mine, therefore, surface waters should not be affected. The original evaporation pond was evaluated by Plateau's consultants in a report dated July-August 1980, and no evidence of leakage, cracking or swelling was found.



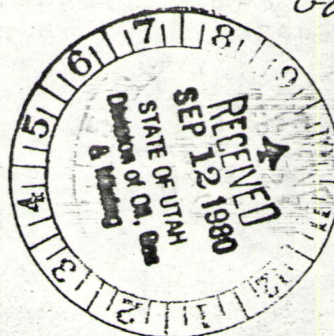
*Copies file Copy
were made Plateau Resources
for the Board ES - Tony M. Mine
Rat.*

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Garfield Co.

9/23/80
R. L. Heiks
Vice President & General Manager

September 11, 1980



State of Utah
Board of Oil, Gas, and Mining
1558 West Temple
Salt Lake City, Utah 84116

Gentlemen:

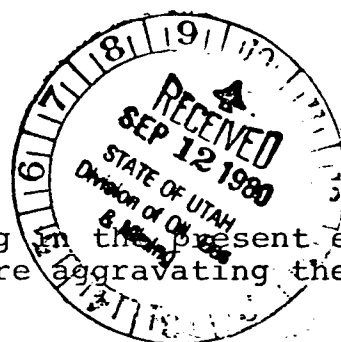
Plateau has recently submitted to the Board for consideration a plan for construction of a water impoundment facility. This facility will be used to dispose of water from Plateau's Tony M uranium mine in Shootering Canyon, Utah. Minerals and elements in the water are such that water quality standards of Utah and the Federal government prohibit discharge into surface drainage.

Plateau has been using a smaller evaporation area that was rapidly constructed to meet an immediate need to prevent discharge of mine water into the surface drainage pattern. (See Plateau's 1979 Annual Report to Board of Oil, Gas, and Mining.)

The Water Quality Section of Utah State Division of Environmental Health imposed certain conditions concerning the small evaporation area. Plateau was in the process of meeting these conditions when a sudden and dramatic increase in mine water during the last part of August made it apparent that the smaller area would not meet dewatering requirements. This large increase in mine water flow (from an estimated 7 to 12 GPM to approximately 40 GPM) took place as evaporation rates were decreasing.

Plateau has ceased mine advancement in the development drifts to avoid encountering more water and is allowing some water to accumulate in the mine in an attempt to develop a head of water that will act against further water flow into the mine. There

State of Utah
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is very little storage capacity remaining in the present evaporation area. Heavy rains in the area are aggravating the situation.

In view of the above information, Plateau is requesting immediate authorization to proceed with construction of the new water impoundment facility.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert L. Head".

RLH/ksd

cc: Mr. William J. Head



STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

DEE C. HANSEN
STATE ENGINEER

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DIRECTING ENGINEERS
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STANLEY GREENEEN
ROBERT L. MORGAN

September 19, 1980

Mr. Ron Daniels
Division of Oil, Gas & Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: Plateau Resources Alternate Impoundment Area

Dear Mr. Daniels:

Plans and specifications for the above mentioned project have been reviewed and approved by this office subject to the following conditions:

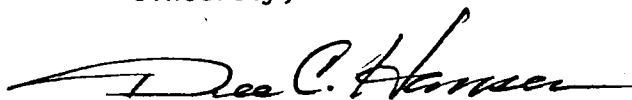
1. That this office be supplied with the names and qualifications of the inspectors for the project prior to the start of construction.
2. That this office be supplied with copies of the daily inspection reports prepared by the inspectors. These are to be submitted weekly.
3. That this office be notified when the foundation and cutoff have been excavated so that it can be inspected prior to the placement of any fill material.
4. That this office be supplied with the results of all material tests performed during the construction period.
5. That this office be notified of the contractor and his estimated starting and completion dates.
6. That this office be notified of any change in the construction practice or materials to be used that are not represented by the construction documents on file. Any major changes must be approved in writing prior to their use or construction.
7. That this office be supplied with a final reproducible copy of the plans that represent the "as-constructed" project.

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Mr. Ron Daniels
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September 19, 1980

8. That this office be notified and involved in a final inspection of the constructed project that involves all interested parties.

If you have any questions concerning this project and its approval, please feel free to contact me or Mr. Bob Morgan of my staff.

Sincerely,



Dee C. Hansen, P.E.
State Engineer

DCH:RLM:sn

cc: Richfield Office
Plateau Resources